REMARKS

In the November 16, 2004 Office Action, the Examiner noted that claims 22-42 were pending in the application; objected to the specification; objected to claims 32 and 39 as dependent upon a rejected base claim; rejected claims 22 and 36 under 35 USC § 102(b); and rejected claims 23-31, 33-38 and 40-42 under 35 USC § 103(a). In rejecting the claims, U.S. Patents 6,169,981 to Werbos and 6,336,109 to Howard (References A and C, respectively, in the November 16, 2004 Office Action), and articles by Neuneier and Gutjahr (References AQ and AR, respectively, in the Information Disclosure Statement filed March 21, 2001) were cited. Claims 22-42 remain in the case. The Examiner's rejections are traversed below.

Rejections under 35 USC § 102(b)

In item 6 on page 3 of the Office Action, claim 22 was rejected under 35 USC § 102(b) as anticipated by Neuneier and in item 10 on pages 10-11, claim 36 was rejected under 35 USC § 102(b) as anticipated by Gutjahr. It is unclear why different references were used to reject claims 22 and 36, since there is very little difference between the operations performed by the system recited in claim 36 and the method recited in claim 22. Therefore, the differences between both claims 22 and 36 and both Neuneier and Gutjahr will be discussed below.

First, Neuneier discloses a method for determining a sequence of actions for a system which has states, where a state transition takes place between two states based on an action. In Neuneier, the sequence of states resulting from the sequence of actions is optimized according to a predetermined optimizing function.

In rejecting claim 22, the Examiner asserted that the optimizing function taught by Neuneier in Section 3.1 contains a variable parameter that corresponds to a risk associated with the resulting sequence of states as regards a predetermined state of the system. However, Section 3.1, "Risk-adjusted MDPs", on page 941 of Neuneier only indicates that it is possible to minimize risk by "variation of λ" which is multiplied times the "variance $\sigma^2(V^\mu(x))$" of "the associated value function $V^\mu(x)$" in the final equation on page 941. There is no suggestion that the risk $\sigma^2(V^\mu(x))$ is known, only that it can be minimized by selection of λ. The mathematical formulae in Section 3.1 do not contain the slightest hint of how the risk could be set. This is acknowledged in, Section 4, "Conclusion and Future Work", which states that "[f]uture work includes approximations and variational methods to compute explicitly the risk $\sigma^2(V^\mu(x))$ of a policy." Since claim 22 recites "using the variable parameter to set a risk which the resulting

sequence of states has with respect to a prescribed state of the system" (claim 22, last 2 lines) and claim 36 recites "the optimization function includes a variable parameter for setting a risk which the resulting sequence of states has with respect to a prescribed state of the system" (claim 36, last 2 lines), it is submitted that <u>Neuneier</u> does not teach or suggest all of the limitations recited claim 22 or claim 36.

In rejecting claim 36, the Examiner asserted that <u>Gutjahr</u> discloses all of the limitations recited in claim 36 in the Abstract and Section 5, "Experimental results". However, as described in the Abstract, <u>Gutjahr</u> is directed a method of estimating a risk of a program crash. A series of actions or "operations of the program" (page 183, fifth paragraph) is determined by a computer program. The risk of the program crashing during its execution is estimated based on "statistical testing with an input distribution corresponding to the operation use" (page 185, first full paragraph). No suggestion has been found of "a variable parameter for setting a risk which the resulting sequence of states has with respect to a prescribed state of the system" as recited in claim 36, or "using the variable parameter to set a risk which the resulting sequence of states has with respect to a prescribed state of the system" as recited in claim 22. Therefore, it is submitted that claims 22 and 36 patentably distinguish over <u>Gutjahr</u>.

Rejections under 35 USC § 103(a)

In item 8 on pages 3-8 of the Office Action, claims 22-31 and 33-35 were rejected under 35 USC § 103(a) as unpatentable over <u>Neuneier</u> in view of <u>Werbos</u>. Nothing has been cited or found in <u>Werbos</u> suggesting modification of <u>Neuneier</u> to overcome the deficiency discussed above. Therefore, it is submitted that claims 22-31 and 33-35 patentably distinguish over <u>Neuneier</u> in view of <u>Werbos</u>.

In item 9 on pages 8-10 of the Office Action, claims 33-35 were rejected under 35 USC § 103(a) as unpatentable over <u>Neuneier</u> in view of <u>Howard</u>. Nothing has been cited or found in <u>Howard</u> suggesting modification of <u>Neuneier</u> to overcome the deficiency discussed above. Therefore, it is submitted that claims 22-31 and 33-35 patentably distinguish over <u>Neuneier</u> in view of <u>Howard</u>.

In item 12 on pages 11-13 of the Office Action, claims 37-38 were rejected under 35 USC § 103(a) as unpatentable over <u>Gutjahr</u> in view of <u>Werbos</u>. Nothing has been cited or found in <u>Werbos</u> suggesting modification of <u>Gutjahr</u> to overcome the deficiency discussed above. Therefore, it is submitted that claims 22-31 and 33-35 patentably distinguish over <u>Gutjahr</u> in view of <u>Werbos</u>.

In item 13 on pages 13-14 of the Office Action, claims 40-42 were rejected under 35 USC § 103(a) as unpatentable over <u>Gutjahr</u> in view of <u>Howard</u>. Nothing has been cited or found in <u>Howard</u> suggesting modification of <u>Gutjahr</u> to overcome the deficiency discussed above. Therefore, it is submitted that claims 22-31 and 33-35 patentably distinguish over <u>Gutjahr</u> in view of <u>Howard</u>.

Summary

It is submitted that the cited prior art references, taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 22-42 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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By:
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